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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/915,984	07/25/2001	Udo Hartmann	MUH-11618	8173

7590

06/18/2003

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EXAMINER

PATEL, PARESH H

ART UNIT

PAPER NUMBER

2829

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/915,984

Applicant(s)

HARTMANN, UDO

Examiner

Paresh Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

The corrected or substitute drawings were received on 03/17/2003. These drawings are not acceptable because highlighted changes and original drawings do not match.

Response to Arguments

Applicant's arguments filed 03/17/2003 have been fully considered but they are not persuasive. Applicant's arguments with respect to added claims 9-16 (which are directly correspond to cancelled claims 1-8) have been considered but are moot in view of the new ground(s) of rejection.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., testing can commence by comparing the data previously written into the semiconductor devices with data now being read out) are not recited in the rejected claim 9 or in cancelled claim 1. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant also argues that using idea of Bottka one of ordinary skill in the art, however, does not obtain any information to specifically transfer electrons into the conduction band in a "faulty" memory cells to enable one to separate these faulty memory cells in which a distance between the valence band and the conduction band is too small. Examiner disagrees because limitation as argued here is/are not claimed,

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and also it is not clear how one could determine transfer of electrons into conduction band took place in a faulty memory cell(s) as argued.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 9, body of the claim does not support the method which enables semiconductor devices to be tested. Also, how one should know when electron from defective devices are transferred into conduction band from the valence band.

Claims 10-16 are rejected because they depend from claim 9.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 9 is rejected under 35 U.S.C. 102(b) as being anticipated by IBM Technical Disclosure Bulletin, Feb. 1987, (TDB-ACC-NO: NN87024105).

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Regarding claim 9, IBM Technical Disclosure Bulletin (hereinafter IBM'105) in fig. 1-7 discloses: a method for enabling semiconductor devices to be tested, the method which comprises: with a tunable light source [lines 25-30 on page 1], projecting light [lines 1-4 of page 4] having a specific wavelength [lines 1-3 of page 3] and a specific intensity onto the semiconductor devices for a predetermined time [lines 23-25 of page 2] so that irradiated electrons in defective ones of the semiconductor devices, in which a distance between a valence band and a conduction band has a lower value as compared with that of defect-free ones of semiconductor devices [lines 10-18 of page 4], are transferred into the conduction band from the valence band [lines 34-44 of page 3].

Claims 9-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Bottka (US 5365334).

Regarding claim 1 Bottka in fig. 1-4 discloses:

A method for enabling semiconductor devices to be tested, the method which comprises: with a tunable light source [10], projecting light having a specific wavelength [lines 18-20 and 60-65 of column 5] and a specific intensity [via 20] onto the semiconductor devices for a predetermined time [46 and 35-37 of column 5] so that irradiated electrons in defective ones of the semiconductor devices, in which a distance between a valence band and a conduction band has a lower value as compared with that of defect-free ones of semiconductor devices [lines 39-51 of 2 and equation 1-6 and lines 51-56 of column 6], are transferred into the conduction band from the valence band [inherent to fig. 3 and lines 23-28 of column 6, wherein measured signal has peak

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60 at 1.4eV and peak 62 at 1.38eV due to impurities (defects in our case) in the sample 12. Also at lines 51-54 of column 6 with fig. 4 suggests that fundamental energy gap is known before the material under test than energy gap during test was measured (at curve 68)).

Regarding claim 10, Bottka discloses: the semiconductor chips are wafer-level memory chips [inherent to sample 12 and lines 21-24 of column 1].

Regarding claim 11, Bottka discloses: constructing the tunable light source is constructed to regulate a frequency of the light in a continuously variable manner [lines 18-20 of column 5].

Regarding claim 12, Bottka discloses: constructing a wafer sampler providing a housing for said light source [housing of 10].

Regarding claim 13, Bottka discloses:

providing a surface for positioning [42] the semiconductor devices thereon;

moveably disposing a component [40] selected from the group consisting of said tunable light source and said surface being moveably disposed to adjust a relative position between said tunable light source and said surface.

Regarding claim 14, Bottka discloses: providing the tunable light source with optical fibers [14] having ends [22], the ends of said optical fibers for projecting the light onto the semiconductor devices.

Regarding claim 15, Bottka discloses: providing the semiconductor devices as memory chips having memory cells [inherent to 12] that have been written to [lines 50-51 of column 2].

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Regarding claim 16, Bottka discloses: providing a voltage supply for supplying a voltage to the semiconductor devices [lines 50-51 of column 2] during testing of the semiconductor devices.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paresh Patel whose telephone number is 703-306-5859. The examiner can normally be reached on M-F (8:30 to 4:30).

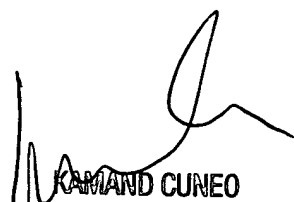
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kammie Cuneo can be reached on 703-308-1233. The fax phone numbers

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for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Paresh Patel
June 4, 2003



KARAND CUNEO
SUPERVISORY PATENT EXAMINER
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